

**NOTES ON THE DISTRIBUTION OF
LEUCTRA CAROLINENSIS AND *L. VARIABILIS*
(PLECOPTERA: LEUCTRIDAE) IN MARYLAND,
WITH AMENDED AND NEW STATE RECORDS¹**

Scott A. Grubbs²

ABSTRACT: The distributions of *Leuctra carolinensis* and *L. variabilis* in Maryland are clarified. The former is a late spring emerging species and known from the Appalachian Plateaus and Blue Ridge portions of the state while the latter species emerges during late autumn and recorded only from the Piedmont and Coastal Plain Physiographic Provinces. The status of *Yugus bulbosus* in Maryland is reevaluated and new state records are reported for five additional species of stoneflies: *Pteronarcys dorsata*, *Acroneuria frisoni*, *Agnetina capitata*, *Neoperla stewarti*, and *Isoperla dicala*. A total of 103 species are now known to occur in Maryland.

KEY WORDS: *Leuctra carolinensis*, *L. variabilis*, Plecoptera, Leuctridae, Maryland.

Grubbs (1997) updated the species list of stoneflies from Maryland by including 36 newly recorded taxa. These additions amended previous lists of Stark et al. (1986) as well as Duffield and Nelson (1990) to 95 species. Grubbs and Stark (2001) and Nelson et al. (2002) have subsequently added two species of *Perlesta* and *Alloperla* *usa* Ricker, respectively, to this list.

Nelson et al. (2002) questioned the record of *Leuctra variabilis* Hanson, which Grubbs (1997) included with late May collection data, correctly indicating that this taxon is an autumn-emergent species (Hanson, 1941). Nelson et al. (2002) provided ample evidence, via scanning electron microscopy, that material collected from the same or nearby localities was actually of the closely related species *L. carolinensis* Claassen. In addition, Nelson et al. (2002) provided the first verified records of *L. variabilis* from Maryland from bogs in the Piedmont and Coastal Plain Physiographic Provinces.

The primary intent of this note is to clarify the identity of the material reported as *L. variabilis* by Grubbs (1997). Secondly, new state records are provided for five additional species and the distribution of *Yugus bulbosus* Frison in Maryland is clarified. All specimens listed below were collected by the author and are deposited in the personal collection of S. A. Grubbs at Western Kentucky University (WKU). Consequently, 103 species of stoneflies are now recorded from Maryland.

Family Leuctridae

Leuctra carolinensis Claassen

Distribution. FREDERICK County (Duffield and Nelson, 1990), GARRETT County.

Notes. All material reported by Grubbs (1997) from Garrett County and pre-

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² Department of Biology, and Center for Biodiversity Studies, Western Kentucky University, Bowling Green, KY 42101, U.S.A. E-mail: scott.grubbs@wku.edu.

viously identified by the author as *L. variabilis* is *L. carolinensis*. Collection records of the latter species from numerous small spring-fed streams from the Appalachian Plateaus Physiographic Province in Maryland range from late May through early September and were first reported from Maryland from the Blue Ridge Physiographic Province by Duffield and Nelson (1990). At present, the only known Maryland localities of *L. variabilis* are from a few sites in Charles and Prince Georges counties.

Family Pteronarcyidae

Pteronarcys dorsata (Say)

Distribution. ALLEGANY County, Sideling Hill Creek, 1 female, 11 June 1997.

Family Perlidae

Acroneuria frisoni Stark & Brown

Distribution. ALLEGANY County, Sideling Hill Creek, 7 males, 16 females, 11-30 June 1997; same but 4 males, 2 females, 30 May 1998.

Agnetina capitata (Pictet)

Distribution. WASHINGTON County, Conococheague Creek, 1 male, 2 females, 14 July 1998.

Neoperla stewarti Stark & Baumann

Distribution. WASHINGTON County, near confluence of Potomac River and Tonoloway Creek, at light, 11 males, 16 females, 23 June 1997.

Family Perlodidae

Isoperla dicala Frison

Distribution. FREDERICK County, Big Hunting Creek, 1 male, 3 June 1997; WASHINGTON County, Licking Creek, 1 male, 1 female, 15 May 1999.

Yugus kirchneri Nelson

Distribution. GARRETT County.

Notes. Nelson (2001) demonstrated that *Y. bulbosus* is a complex of three closely related species. All specimens reported of *Y. bulbosus* (Frison) from Maryland by Grubbs (1997) were reexamined and are now considered to be *Y. kirchneri* Nelson. The remaining species, *Y. bulbosus*, *Y. kondratieffi* Nelson, and *Y. arinus* (Frison), are presently known only from the southern Appalachian Mountains.

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